

4 Energy Efficiency of the IEEE 802.15.4 Standard in Dense Wireless Microsensor Networks: Modeling and Improvement Perspectives

Bruno Bougard, Francky Catthoor, Denis C. Daly, Anantha Chandrakasan, Wim Dehaene March 2005 DATE '05: Proceedings of the conference on Design, Automation and Test in Europe - Volume 1, Volume 1

Publisher: IEEE Computer Society

Full text available: Pdf (429.43 KB) Additional Information: full citation, abstract, references, cited by, index terms

Bibliometrics: Downloads (6 Weeks): 9, Downloads (12 Months): 106, Citation Count: 6
Wireless microsensor networks, which have been the topic of intensive research in recent years, are now emerging in industrial applications. An important milestone in this transition has been the release of the IEEE 802.15.4 standard that specifies interoperable ...

5 Source-oriented topology aggregation with multiple QoS parameters in hierarchical networks

Turgay Korkmaz, Marwan Krunz

October 2000 ACM Transactions on Modeling and Computer Simulation (TOMACS),
Volume 10 Issue 4

Publisher: ACM

Full text available: Pdf (290.72 KB) Additional Information: full citation, abstract, references, cited by, index terms, review

Bibliometrics: Downloads (6 Weeks): 10, Downloads (12 Months): 63, Citation Count: 9
In this paper, we investigate the problem of topology aggregation (TA) for scalable, QoS-based routing in hierarchical networks. TA is the process of summarizing the topological information of a subset of network elements. This summary is flooded throughout ...

Keywords: ATM networks, PNNI, QoS-based routing, scalable routing, topology aggregation

6 Data consistency in a large-scale runtime infrastructure

Buquan Liu, Huaimin Wang, Yiping Yao

December 2005 WSC '05: Proceedings of the 37th conference on Winter simulation Publisher: Winter Simulation Conference

Full text available: Pdf (322.56 KB) Additional Information: full citation, abstract, references, cited by

Bibliometrics: Downloads (6 Weeks): 1, Downloads (12 Months): 19, Citation Count: 2
In order to support large-scale distributed simulation, we have developed a RTI called StarLink+ with particular architecture which is compliant with IEEE 1516. StarLink+ is composed of a Central RTI server and multiple Local RTI servers. Each Local ...

Verification of embedded systems using a petri net based representation Luis Alejandro Cortés, Petru Eles, Zebo Peng September 2000 I SSS '00: Proceedings of the 13th international symposium on System synthesis Publisher: IEEE Computer Society

Full text available: (99.66 KB) Additional Information: full citation, abstract, references, cited by

Bibliometrics: Downloads (6 Weeks): 6, Downloads (12 Months): 35, Citation Count: 5

The ever increasing complexity of embedded systems consisting of hardware and software components poses a challenge in verifying their correctness. New verification methods that overcome the limitations of traditional techniques and, at the same time, ...

8 Hardware/software partitioning of VHDL system specifications

P. Eles, K. Kuchcinski, Z. Peng, A. Doboli

September 1996 EURO-DAC '96/ EURO-VHDL '96: Proceedings of the conference on

European design automation

Publisher: IEEE Computer Society Press

Full text available: Pdf (63.34 KB) Additional Information: full citation, references, cited by, index terms

Bibliometrics: Downloads (6 Weeks): 2, Downloads (12 Months): 19, Citation Count: 3

9 ACM SIGOPS Operating Systems Review: Volume 12 Issue 4

October 1978 issue Volume 12 Issue 4
Publisher: ACM

Additional Information: full citation

Bibliometrics: Downloads (6 Weeks): n/a, Downloads (12 Months): n/a, Citation Count: 0

10 Contextual prototyping of user interfaces

Chris Stary

August 2000 DIS '00: Proceedings of the 3rd conference on Designing interactive systems: processes, practices, methods, and techniques

Publisher: ACM

Full text available: Pdf (504.96 KB) Additional Information: full citation, abstract, references, cited by, index terms

Bibliometrics: Downloads (6 Weeks): 7, Downloads (12 Months): 69, Citation Count: 1

Contextual development differs from traditional user interface development in several ways: It focuses on the context of usage and the user population rather than on the technical features required for interaction. However, the latter come into play ...

Keywords: contextual design, customization, interactive work design, lifecycle management, model-based development, object-oriented modeling, prototyping, seamless development, tools, usability engineering, user-centered system design

11 RecPlay: a fully integrated practical record/replay system

Michiel Ronsse, Koen De Bosschere

May 1999 ACM Transactions on Computer Systems (TOCS), Volume 17 Issue 2

Publisher: ACM

Full text available: Pdf (324.00 KB) Additional Information: full citation, abstract, references, cited by, index

Bibliometrics: Downloads (6 Weeks): 20, Downloads (12 Months): 152, Citation Count: 26

This article presents a practical solution for the cyclic debugging of nondeterministic parallel programs. The solution consists of a combination of record/replay with automatic on-the-fly data race detection. This combination enables us to limit the ...

Keywords: binary code modification, multithreaded programming, race detection

12 Stenning's protocol implemented in UDP and verified in Isabelle

Michael Compton

January 2005 CATS '05: Proceedings of the 2005 Australasian symposium on Theory of computing - Volume 41, Volume 41

Publisher: Australian Computer Society, Inc.

Full text available: Pdf (248.21 KB) Additional Information: full citation, abstract, references, cited by, index terms

Bibliometrics: Downloads (6 Weeks): 2, Downloads (12 Months): 22, Citation Count: 2

This paper is about the mechanical verification of UDP based network programs. It uses the UDP portion of a formal model of the Internet protocols TCP (Transmission Control Protocol) and UDP (User Datagram Protocol). The model includes asynchronous message ...

Keywords: distributed systems, formal verification, theorem proving

13 Migrating to a real-time distributed parallel simulator architecture

Bernardt Duvenhage, Derrick G Kourie

July 2007 SCSC: Proceedings of the 2007 summer computer simulation conference Publisher: Society for Computer Simulation International

Full text available: Pdf (752.06 KB) Additional Information: full citation, abstract, references

Bibliometrics: Downloads (6 Weeks): 11, Downloads (12 Months): 28, Citation Count: 0

A legacy non-distributed logical time simulator is migrated to a distributed architecture to parallelise execution. The existing Discrete Time System Specification (DTSS) modelling formalism is retained to simplify the reuse of existing models. This ...

Keywords: discrete time step simulation, high real-time frame-rate, parallel simulation, peer-to-peer, publish-subscribe

14 Ontology support for web service processes

C. Pahl, M. Casey

September 2003 ESEC/ FSE-11: Proceedings of the 9th European software engineering conference held jointly with 11th ACM SIGSOFT international symposium on Foundations of software engineering

Publisher: ACM

Full text available: Pdf (200.99 KB) Additional Information: full citation, abstract, references, cited by, index terms

Bibliometrics: Downloads (6 Weeks): 15, Downloads (12 Months): 172, Citation Count: 3

Web Services are software services that can be advertised by providers and deployed by customers using Web technologies. This concept is currently carried further to address Web service choreography. Choreography refers to the composition of individual ...

Keywords: ontologies, service choreography, web services

## 15 A quantitative comparison of parallel computation models

Ben H. H. Juurlink, Harry A. G. Wijshoff

August 1998 ACM Transactions on Computer Systems (TOCS), Volume 16 Issue 3

Publisher: ACM

Full text available: Pdf (1.06 MB)

Additional Information: full citation, abstract, references, cited by, index ferms

Bibliometrics: Downloads (6 Weeks): 8, Downloads (12 Months): 75, Citation Count: 2

In recent years, a large number of parallel computation models have been proposed to replace the PRAM as the parallel computation model presented to the algorithm designer. Although mostly the theoretical justifications for these models are sound, and ...

Keywords: parallel computation models, performance evaluation

16 JMTP: an architecture for exploiting concurrency in embedded Java applications with real-time considerations

Rachid Helaihel, Kunle Olukotun

November 1999 I CCAD '99: Proceedings of the 1999 IEEE/ACM international conference on Computer-aided design

Publisher: IEEE Press

Full text available: Pdf (139.94 KB) Additional Information: full citation, abstract, references, index terms

Bibliometrics: Downloads (6 Weeks): 2, Downloads (12 Months): 11, Citation Count: 0

Using Java in embedded systems is plagued by problems of limited runtime performance and unpredictable runtime behavior. The Java Multi-Threaded Processor (JMTP) provides solutions to these problems. The JMTP architecture is a single chip containing ...

## 17 Random walk based node sampling in self-organizing networks

Ming Zhong, Kai Shen

July 2006 ACM SIGOPS Operating Systems Review, Volume 40 Issue 3

Publisher: ACM

Full text available: Pdf (370.33 KB) Additional Information: full citation, abstract, references, index terms

Bibliometrics: Downloads (6 Weeks): 7, Downloads (12 Months): 97, Citation Count: 0

Random walk is a means of network node sampling that requires little index maintenance and can function on almost all connected network topologies. With careful guidance, node samples following a desired probability distribution can be generated with ...

## 18 Lightweight time synchronization for sensor networks

Jana van Greunen, Jan Rabaey

September 2003 WSNA '03: Proceedings of the 2nd ACM international conference on Wireless sensor networks and applications

Publisher: ACM

Full text available: Pdf (1.38 MB) Additional Information: full citation, abstract, references, cited by, index

Bibliometrics: Downloads (6 Weeks): 19, Downloads (12 Months): 114, Citation Count: 15

This paper presents lightweight tree-based synchronization (LTS) methods for sensor networks. First, a single-hop, pair-wise synchronization scheme is analyzed. This scheme requires the exchange of only three messages and has Gaussian error properties. ...

Keywords: lightweight, multi-hop, spanning tree, synchronization

19 A lightweight idempotent messaging protocol for faulty networks

Jeremy Brown, J. P. Grossman, Tom Knight

August 2002 SPAA '02: Proceedings of the fourteenth annual ACM symposium on Parallel algorithms and architectures

Publisher: ACM

Full text available: Pdf (283.12 KB)

Additional Information: full citation, abstract, references, cited by, index terms

Bibliometrics: Downloads (6 Weeks): 0, Downloads (12 Months): 18, Citation Count: 1

As parallel machines scale to one million nodes and beyond, it becomes increasingly difficult to build a reliable network that is able to guarantee packet delivery. Eventually large systems will need to employ fault-tolerant messaging protocols that ...

Keywords: block-structured traces, idempotence, source-reliable messaging

<sup>20</sup> An approach to schedulability analysis of UML-based real-time systems design

Dongxi Jin, David C Levy

July 2002 WOSP '02: Proceedings of the 3rd international workshop on Software and performance

Publisher: ACM

Full text available: Pdf (150.87 KB) Additional Information: full citation, abstract, references

Bibliometrics: Downloads (6 Weeks): 3, Downloads (12 Months): 53, Citation Count: 0

This paper presents an approach to analyzing the timing and schedulability performance of a system model designed with the Unified Modeling Language (UML). As demand grows for a better way of developing complex real-time (RT) software systems, object-oriented ...

Keywords: real-time schedulability, transaction model, unified modeling language (UML)

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